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ARTICLE XIX.

Description of a New Genus (Basistoma,) of the Family Melaniana, together with some New Species of American Melaniæ. By Isaac Lea. Read March 5th, 1852.

FAMILY MELANIANA.

GENUS BASISTOMA.*

Testa conica. Apertura ovata, basi abscissa. Labrum acutum. Columella lævi. Operculum —.

THE particular shell for which I propose this genus was given to me by Amory Edwards, Esq., late the Consul of the United States at Rio, who brought it from four hundred miles up the river Tocatinus, five hundred miles distant from the ocean, at the mouth of the Amazon. It differs from any of the family of *Melaniana* in the cut at the base, and it has none at the superior part of the aperture. It comes near to *Pirena*, but wants the superior cut, and it differs from *Melanopsis* in its general form as well as in having no callus on the columella. The *Melaniana* being so enormously developed, and having but few genera, I think it advisable to constitute new ones, whenever a group can be well characterized, which is the case with this form. I think that *Melania transversa*, (Nobis,) from Guiana, and *M. Braziliensis*, (Nobis,) would properly come under this division, and very likely other characteristic species will be found in that portion of South America whence these three come. The genus *Melatoma*, Swainson, is a well characterized group in some respects near to this. While it is emarginate at base, it has an emargination also towards the upper portion of the outer lip, and the group, as far as I know it, has a general and well characterized outline, being somewhat mitraform. I think that my *M. microstoma*, *tornatella* and *rudis* all belong to a group which would constitute a new genus, unless it could be put into one of Mr. Swainson's genera, all the types of which I have not seen.

* βασις, base, and τεμνω, to cut.

When I proposed the name of *Schizostoma* for a genus of *Melaniana* with a cut at the superior portion of the aperture, I was not aware that M. Bronn had already used that name for a fossil genus. I now propose to substitute *Schizochilus*, from σχιζω, to cut, and χεῖλος, lip.

I very much regret that the operculum did not accompany this specimen, suspecting, as I do, that it will be found to differ from the genus *Melania*, and be somewhat like *M. transversa*, which I propose above to bring into this group. The operculum of this latter species was described by me as having the polar point near the centre, and having five revolutions.*

BASISTOMA EDWARDSII. Pl. XXX. Fig. 1.

Testâ striatâ, turritâ, subcrassâ, geniculatâ, tenebroso-cornéâ; spirâ valdè attenuatâ; suturis valdè impressis; anfractibus planulatis; supernè impressis, lineis creberrimis instructis; aperturâ subgrandi, ellipticâ, intus albidâ, ad basim valdè abscissâ; columellâ lævi tortâque.

Shell striate, turreted, rather thick, geniculate, dark horn-colour; spire very much drawn out; sutures very much impressed; whorls flattened, impressed above, thickly covered with revolving lines; aperture rather large, elliptical, white within, at the base abruptly cut off; columella smooth and twisted.

Hab. River Tocatinus, South America, Amory Edwards, Esq.

My cabinet.

Diam. .50,

Length 1.92, of an inch.

Remarks.—This very beautiful and interesting shell is remarkable for the new form it presents in the aperture. It is thickly striate all over the whorls, and looks like a succession of coils of rope piled on each other. The two lower whorls are impressed above the middle, which gives it a geniculate character immediately below the suture. Between the striæ there are very minute sculptured points. The apex being eroded, the number of whorls are not ascertainable, but they are probably about ten. The outer lip is very sharply edged, and the central portion very much extended on a curve. The aperture is about one-fourth the length of the shell.

The form of this species reminds one of *Achatina columna* (*Lymnea columnaris*, Lamarck,) which is however, a land shell. It is drawn out like it and has flattened sides, with a cut at the base of nearly the same form. In other characters they are not at all alike, the *columna* being sinistral, covered with granules, much larger and belonging to a different genus altogether.

I dedicate this fine species to my friend Mr. Edwards, to whom I am indebted for it and many other interesting shells from the waters and banks of the Amazon.

MELANIA PERSTRIATA. Pl. XXX. Fig. 2.

Testâ striatâ, acuto-conoideâ, subtenui, cinnamomeo-brunéâ; spirâ elevatâ, subattenuatâ, ad apicè carinatâ et granulatâ; suturis impressis; anfractibus septenis, convexis; aperturâ parvâ, ellipticâ, ad basim angulatâ, intus rufâ; columellâ lævi.

Shell striate, acutely conical, rather thin, cinnamon-brown; spire elevated, somewhat attenuate, at the apex carinate and granulate; sutures impressed, whorls seven, convex; aperture small, elliptical, angular at the base, reddish within; columella smooth.

* Proceedings Zoological Soc., London, 1851, p. 187.

Hab. Coosa river, Alabama, Prof. Brumby. Huntsville, Tenn., Mr. J. Clark. Tennessee, Prof. Troost.

My cabinet and cabinets of Prof. Brumby and Mr. Clarke.

Diam. .28, Length .83, of an inch.

Remarks.—Among the numerous *Melania* sent to me long since by my late friend Prof. Troost, were several specimens of the young of this species. I could not satisfactorily place them in any known species, and I put them temporarily with *striatula*, (Nobis,) which is strongly allied to the species which I have described above. Recently, I have received from Prof. Brumby and from Mr. J. Clark several adult specimens, which leave the younger in my possession no longer in doubt,—they were recognised at once to belong to those more recently received. All the specimens—some dozen—before me are reddish; the *striatula* is horn-coloured, with a white aperture. The latter is also flatter in the whorls, and not so carinate above, nor are the sutures so deeply impressed. Some of the specimens are quite smooth on the body whorl. Aperture about one-third the length of the shell.

MELANIA SCULPTILIS. Pl. XXX. Fig. 3.

Testâ perstriatâ, conoideâ, subtenui, corneâ; spirâ acuminatâ, ad apicem carinatâ et granulâtâ; suturis irregulariter impressis; anfractibus decim, subplanulatis; striis crebris et inter sculpturatâ; aperturâ parvâ, ellipticâ, ad basim angulatâ, intus albidâ; columellâ incurvâ tortâque.

Shell thickly striate, conical, rather thin, horn colour; spire pointed, towards the apex carinate and granulate; sutures irregularly impressed; whorls ten, rather flattened; striæ close, and between them sculptured; aperture small, elliptical, angular at base, white within; columella incurved and twisted.

Hab. Tennessee, Mr. J. Clark.

My cabinet and cabinet of Mr. Clark.

Diam. .24, Length .55, of an inch.

Remarks.—Two specimens are before me, which are precisely alike. It is a very remarkable species, having regular and close striæ over the whole of the lower whorls, between which striæ there is a double row of minute indented marks, very close to each other, and only visible with a lens. I have seen no such marks on any other species. In outline it is closely allied to *striatula*, (Nobis,) but it is a smaller species, and has not the cancellation of that species. The aperture is rather more than one-third the length of the shell. The outer lip is broken.

MELANIA CLARKII. Pl. XXX. Fig. 4.

Testâ plicatâ, claviformis, subtenui, tenebroso-fuscâ; spirâ elevatâ, attenuatâ; suturis subimpressis; anfractibus planulatis; aperturâ parvâ, subellipticâ, ad basim angulatâ, intus tenebrôsâ; columellâ tortâ.

Shell folded, club-shaped, rather thin, dark-brown; spire elevated, drawn out; sutures somewhat impressed; whorls flattened; aperture small, rather elliptical, at the base angular, within dark; columella twisted.

Hab. Duck Creek, Tenn., Mr. Joseph Clark.

My cabinet and cabinet of Mr. Clark.

Diam. .23, Length .73, of an inch.

Remarks.—The form of this species is more attenuate than usual with the clavate forms. It has about ten whorls; those above the body whorl being disposed to be both plicate and striate. Towards the apex they are all thickly striate. On all the specimens before me, on the lower whorls, there are irregular oblique striæ, somewhat similar to those on the *M. Ocoeënsis*, (Nobis,) which give them a malleate character. On the upper margin of the whorls, along the sutures, there is usually an indistinct light line. The outer lip is broken.

MELANIA BRUMBYI. Pl. XXX. Fig. 5.

Testâ striatâ, pyramidatâ, subcrassâ, rufo-bruneâ; spirâ valdè elevatâ, ad apicè carinatâ; suturis vix impressis; anfractibus planulatis; aperturâ subgrandi, rhomboideâ, intus rubiginosâ; columellâ tortâ.

Shell striate, pyramidal, rather thick, reddish-brown; spire very much elevated, carinate at the apex; sutures but slightly impressed; whorls flattened; aperture rather large, rhomboidal, within rubiginose; columella twisted.

Hab. Coosa river, Alabama, Prof. Brumby. Huntsville, Alabama, Mr. J. Clark.

My cabinet and cabinets of Prof. Brumby and Mr. Clark.

Diam. .53,

Length 1.72, of an inch.

Remarks.—This is a very remarkable species, and among the largest of our *Melaniæ*. In form and size it is allied to *annulifera*, Con., but may easily be distinguished by its more numerous striæ, its reddish colour, and the form of its aperture, which is more open. In the *Brumbyi* there is an angle in the middle of the whorl, which gives the aperture a rhomboidal form. The columella is rufous and the channel whitish. The apex of each of them being broken, the number of whorls cannot be correctly ascertained. I should suppose there were at least ten. Some of the specimens here are beautifully granulate between the striæ. The aperture is not quite one-fourth the length of the shell. Along the suture, on the upper part of the whorl, there is a line of a lighter colour than the other part.

I dedicate this species to Prof. R. T. Brumby, who has done so much in bringing to light the interesting shells of Alabama.

MELANIA OBLITA. Pl. XXX. Fig. 6.

Testâ valdè carinatâ, turritâ, cochleæformis, subtenui, corneâ; spirâ attenuatâ; suturis linearibus; anfractibus duodecim, acutè carinatâ; aperturâ parvâ, ellipticâ, intus albidâ; columellâ albâ tortâque.

Shell very much carinated, turreted, screw-shaped, rather thin, horn-coloured; spire drawn out; sutures linear; whorls twelve, acutely carinate; aperture small, elliptical, within whitish; columella white and twisted.

Hab. Tennessee?

My cabinet.

Diam. .30,

Length .96, of an inch.

Remarks.—I have about a dozen of this species, which is very distinct from any with which I am acquainted. The locality I am uncertain about, the label being by some accident lost. I believe it comes from Tennessee, but am not certain. Its very marked character of a screw, or rather the end of a gimlet, strikes one at once. In most species there is a thread-like line above the carina and several below. The carina

is not usually persistent on the body whorl. It is nearest in form and size to *M. percarinata*, Con., but may be easily distinguished by the absence of granules between the carinæ, the length of the spire, having three or four more whorls, and in being less shining. The aperture is not quite one-third the length of the shell.

MELANIA FURVA. Pl. XXX. Fig. 7.

Testâ lævi, conoideâ, subcrassâ furvâ; spirâ subelevatâ; suturis excavatis; anfractibus planulatis; aperturâ parvâ, subrhomboideâ, ad basim angulatâ, intus purpureâ; columellâ purpureâ tortâque.

Shell smooth, conical, rather thick, dusky; spire rather elevated; sutures furrowed; whorls flattened; aperture small, subrhomboidal, at the base angular, within purplish; columella purple and twisted.

Hab. Branch of Coosa River, Alabama, Prof. Brumby.

My cabinet and cabinet of Prof. Brumby.

Diam. .30,

Length .84, of an inch.

Remarks.—A single specimen of this species was received from Prof. Brumby. It has the apex so much eroded as to present only a little more than three whorls, which are, however, perfect, and enable me to distinguish it from its allied species, the nearest of which is *M. arata*, (Nobis.) The sutures have the same furrowed line, and the sides of the whorl are alike flattened. The aperture, however, differs in form and colour. In the *arata* the columella is straight down to the channel at the base; in the *furva*, it is curved to the right and the channel is less marked. The length of the aperture, in perfect specimens, must be about one-third the length of the shell.

The *Alexandrensis*, (Nobis,) from Louisiana, is very closely allied to this species, and when perfect specimens of both shall be obtained, they may possibly be found to be the same.

MELANIA SELLERSIANA. Pl. XXX. Fig. 8.

Testâ plicatâ, parvâ, conoideâ, subcrassâ, bruneo-nigricente; spirâ subbrevis; suturis linearibus; anfractibus subconvexis; aperturâ magnâ, ellipticâ, ad basim rotundatâ, intus purpureâ; columellâ valdè incurvatâ.

Shell folded, small, conical, rather thick, very dark-brown; spire rather short; sutures linear; whorls slightly convex; aperture large, elliptical, rounded at the base, within purple; columella very much incurved.

Hab. Cany Fork, Tennessee, Mr. Coleman Sellers.

My cabinet and cabinets of Mr. Sellers and Mr. Anthony.

Diam. .16,

Length .38, of an inch.

Remarks.—This is an interesting little species, somewhat like *M. Nickliniana*, (Nobis,) in its general appearance and size, but is less inflated, and of a darker colour. It might be supposed that its being a plicate shell would at once distinguish it; but the *Sellersiana* seems to be very variable in the character of its folds, some of the specimens really having none remaining. These may have had folds near the apex, which is now eroded. Some of those before me are beautifully folded down to the last half of the body whorl, the folds being rather large and straight. The surface varies very much; some of the specimens being beautifully malleate, while on others no such marks can be observed. The outer lip is broken.

The apex being eroded in all the specimens, I am not sure of the number of the whorls; there may be about six. The aperture is about one-half the length of the shell.

I dedicate this species to Mr. Coleman Sellers, of Cincinnati.

MELANIA OPPUGNATA. Pl. XXX. Fig. 9.

Testâ lævi, truncatâ, cylindræâ, percrassâ, luteo-cornæâ; spirâ truncatâ; suturis magnis et valdè irregulariter impressis; anfractibus valdè compressis, supernè geniculatis; aperturâ prælongâ, valdè constrictâ, supernè callosâ, intus albâ; columellâ tortâ, supernè valdè incrassatâ.

Shell smooth, truncate, cylindrical, very thick, yellowish horn-colour; spire cut off; sutures large and very irregularly impressed; whorls very much compressed, geniculate above; aperture very long, very much narrowed, above callous, within white; columella twisted, and very much thickened above.

Hab. Alabama river, Mr. C. M. Wheatley.

My cabinet and cabinet of Mr. Wheatley.

Diam. .41,

Length — ?

Remarks.—This is a very remarkable species. The two specimens before me are both cut off, leaving little more than the body whorl. When taken they were evidently living and healthy specimens, but the eroded and fractured spires give them the appearance of old and diseased shells, which is by no means the case. The upper part of the whorl, along the suture, is irregularly fractured round the whole circle. This arises from the fact that the animal having filled up the channel with calcareous deposit, suddenly recommences at a new line of growth, some distance below, leaving open and bare of epidermal matter this upper portion of the channel, which consequently having a sharp edge, becomes more or less fractured. The whorls are so much flattened that the two sides are nearly parallel. One of the specimens has a small spot of brown in the aperture above and below—the other has none. This species is allied to *auriculaformis*, (Nobis,) on one side, and *olivula*, Con., on the other, but it may be easily distinguished from both of them. The former is a smaller shell and more fusiform; the latter is more conical, less thickened on the columella, and not irregularly fractured in the suture. The number of whorls or proportional size of the aperture cannot be ascertained on the specimens before me. They have the appearance of having been very much exposed to an attacking enemy, hence the name.

MELANIA SAFFORDII. Pl. XXX. Fig. 10.

Testâ lævi, obtuso-conoideâ, crassâ, subfusiformis, tenebroso-viridi; spirâ subbrevis; suturis linearibus; anfractibus convexiusculus, ultimo magno; aperturâ subgrandi, ovato-productâ, intus purpureâ; columellâ purpureâ tortâque.

Shell smooth, obtusely conical, thick, subfusiform, dark-green; spire rather short; sutures linear; whorls a little convex, the last large; aperture rather large, ovately elongated, within purple; columella purple and twisted.

Hab. Lebanon, Wilson county, Tennessee, Mr. James M. Safford.

My cabinet and cabinet of Mr. Safford.

Diam. .37,

Length .85, of an inch.

Remarks.—This is a very distinct species, with a not uncommon form. The green colour is unusual. On the upper part of the whorl, and on the line of the suture there is a light or brownish band. The body whorl is rather suddenly enlarged in the middle, which gives it a slight gibbous appearance, and it is irregularly transversely striate. The apex of each of the three specimens under my examination being eroded, the number of whorls cannot be exactly ascertained, but I think there must be about six. The aperture is quite one-half the length of the shell. It is allied to *M. sordida*, (Nobis,) in outline, but may easily be distinguished in colour and the gibbous swelling on the whorls. I name this after Mr. Safford, to whose kindness I owe this and some other fine specimens from Tennessee.

MELANIA PINGUIS. Pl. XXX. Fig. 11.

Testá lævi, inflatá, subrotundá, percrassá, tenebroso-fuscá; spirá obtuso-conoideá; suturis impressis; anfractibus convexiusculus; aperturá magná, rotundatá, intus vel albá vel purpureá; columellá incurvá, incrassatá.

Shell smooth, inflated, almost round, very thick, dark-brown; spire very obtusely conical; sutures impressed; whorls a little convex; aperture very large and rounded, within either white or purple; columella incurved and thickened.

Hab. Lebanon, Wilson county, Tenn., Mr. J. M. Safford.

My cabinet and cabinet of Mr. Safford.

Diam. .34,

Length .53 of an inch.

Remarks.—I have three specimens before me from Mr. Safford; two of them are purple within and one white. None of them are perfect on the apex, but I presume that the number of whorls must be five. One of the specimens has four. In outline it is very much like *M. inflata*, (Nobis,) but it differs totally in the form of the columella. In that species the columella is twisted backwards, and makes an angular oblique channel—in the *pinguis* it is regularly curved, with scarcely a perceptible indentation in the place of a channel. The aperture is fully one-half the length of the shell.

MELANIA GIBBOSA. Pl. XXX. Fig. 12.

Testá lævi, parvá, obtuso-conoideá, gibbosá, subfusiformi, subtenui, virido-corneá; spirá obtusá; suturis irregulariter impressis; anfractibus quinque, subconvexá; aperturá magná, ellipticá, intus bivittatá; columellá rubiginosá, incrassatá, planulatá, impressá et valdè curvatá.

Shell smooth, small, obtusely conical, gibbous, subfusiform, rather thin, greenish horn-colour; spire obtuse, sutures irregularly impressed; whorls five, somewhat convex; aperture large, elliptical, within double banded; columella rubiginose, thickened, flattened, impressed and much curved.

Hab. Scioto river, Ohio, Mr. C. M. Wheatley.

My cabinet and cabinet of Mr. Wheatley.

Diam. .25,

Length .43, of an inch.

Remarks.—This is a small, very remarkable species. There is a slight depression above the middle of the whorl, which gives it a somewhat gibbous form. The most unusual character pertaining to this species is, however, the very flat and impressed columella,

more impressed at the point of the umbilical region. The columella on the upper part of these two specimens is not thickened, but it is of a dark-brown colour, and being also dark below, the colour extends to the outer side of the whorl, and there makes two rather indistinct bands. In outline it is allied to *M. fusiformis*, (Nobis,) but they differ entirely in the columella and in the length of the aperture. The aperture is rather more than one-half the length of the shell.

I have had some doubts of the Scioto being the real habitat of this shell; but Mr. Wheatley says it was sent from thence to him. It seems to have a more southern aspect.

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